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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,724	07/15/2004	Ludwig Bar	2001P22564WOUS	4377
7590	12/07/2005		EXAMINER AURORA, REENA	
Siemens Corporation Intellectual Property Department 170 Wood Avenue South Iselin, NJ 08830			ART UNIT 2862	

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/501,724

Applicant(s)

BAR ET AL.

Examiner

Reena Aurora

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13 - 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13 - 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 07/15/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

The applicant has canceled claims 1 – 12.

The applicant has added new claims 13 – 27.

### ***Drawings***

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the turbine component as claimed in claims 1 and 23 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 13 is objected to because of the following informalities: What is a different radii of curvature? What is a flexible rear key? Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (EP 0228177).

As to claims 13 and 22, Johnson discloses an eddy current measuring device including a flexible base (52, fig. 6); a first electrical component (50) connected to the flexible base (52); a second electrical component (50) connected to the flexible base

(52) being collectively sufficiently flexible such that they can be matched to different radii of curvature of a turbine component (page 3, lines 36 - 39); and a flexible rear key (46) that at least partially covers the first and second electrical components adapted for ferromagnetic signal amplification (Note fig. 5 and 6).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14 – 21 and 23 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (EP 0228177) in view of Heidenhain et al. (4,863,536).

As to claim 23, Johnson discloses an eddy current measuring device including a flexible eddy current measuring device, comprising a flexible base (52, fig. 6); a first electrical component (50) connected to the flexible base (52); a second electrical component (50) connected to the flexible base (52), the first and second electrical components and the flexible base being collectively sufficiently flexible such that they can be matched to different radii of curvature of a turbine component (page 3, lines 36 - 39). Johnson fails to disclose a flexible curable encapsulation element attached to at least one electrical component, and having a geometric surface similar to a curved surface of a turbine component, and cured to geometrically conform to the curved surface. Heidenhain et al. (hereinafter Heidenhain) discloses a method of

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encapsulating electrical components with curable materials (col. 10, lines 9 - 13).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Johnson with the teachings of Heidenhain such that encapsulating the electrical components with curable material to conform with the shape of the device.

As to claims 14 - 15 and 24 - 25, Johnson discloses that the flexible base (52) is a flexible sheet formed of polyimide (page 3, lines 36 - 37).

As to claims 16 and 26, Johnson discloses that at least one coil (50) is connected to the flexible base as an electrical component and is a copper coil (col. 2, lines 49 - 51).

As to claims 17 - 19, Johnson discloses that the flexible rear key is formed by a plastically deformable encapsulation compound. Johnson fails to disclose a flexible rear key is formed by a plastically deformable encapsulation. Heidenhain et al. (hereinafter Heidenhain) discloses a method of encapsulating electrical components with curable materials (col. 10, lines 9 - 13). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Johnson with the teachings of Heidenhain such that encapsulating the electrical components with curable material to conform with the shape of the device.

As to claim 20, Johnson discloses that the device has at least one coil (50) as an electrical component, that is arranged in a planer manner on the flexible base (52) (page 3, lines 38 - 39).

As to claims 21 and 27, Johnson discloses that the device has ferromagnetic signal amplification (page 3, lines 32 - 36).

***Prior Art of Record***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shonji (6,954,065) is cited for its disclosure of an eddy current probe.

Hensley et al. (6,198,280) is cited for its disclosure of an eddy current flexible field probe deployed through a loading platform.

Hurley et al. (5,510,709) is cited for its disclosure of an eddy current surface inspection probe for aircraft fastener inspection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, E. Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Reena Aurora